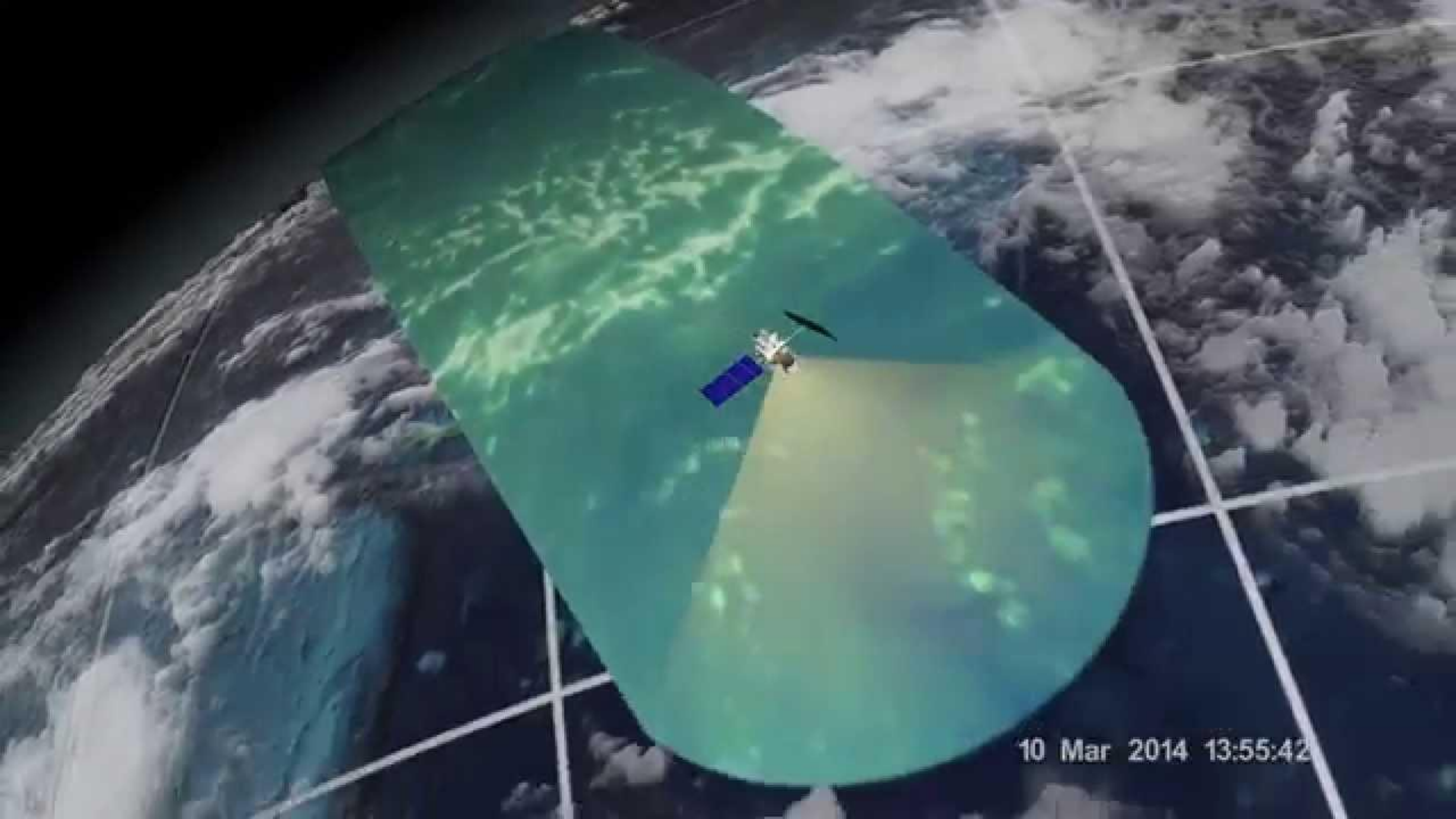
10 Mar 2014 13:55:42

1
00:00:00,010 --> 00:00:04,060
The new GPM Microwave Imager, or GMI, produced

2
00:00:04,080 --> 00:00:08,110
unprecedented images of an extra-tropical cyclone in the Northwest

3
00:00:08,130 --> 00:00:12,150
Pacific Ocean, east of Japan, on March 10, 2014.

4
00:00:12,170 --> 00:00:16,190
The GMI measures the natural energy radiated by

5
00:00:16,210 --> 00:00:20,220
different precipitation in the form of brightness temperatures.

6
00:00:20,240 --> 00:00:24,240
The GMI produces a critical reference standard, which unifies all the member

7
00:00:24,260 --> 00:00:28,260
satellites of the GPM Constellation. The instrument

8
00:00:28,280 --> 00:00:32,270
has 13 channels, four more than onboard TRMM, and this

9
00:00:32,290 --> 00:00:36,300
greater sensitivity allows GPM to measure a greater variety of

10
00:00:36,320 --> 00:00:40,330
precipitation type and intensity. Each channel

11
00:00:40,350 --> 00:00:44,370
has a frequency range that can detect a different type of precipitation.

12
00:00:44,390 --> 00:00:48,410
The lower frequencies for moderate to heavy rain,

13
00:00:48,430 --> 00:00:52,440

the middle frequencies for a mix of rain and snow,

14
00:00:52,460 --> 00:00:56,480
and the higher frequencies for falling snow and ice.

15
00:00:56,500 --> 00:01:00,520
Scientific algorithms then translate the

16
00:01:00,540 --> 00:01:04,540
GMI's brightness temperature data into more meaningful products, such as

17
00:01:04,560 --> 00:01:08,560
rain rates. Because GPM's coverage extends beyond

18
00:01:08,580 --> 00:01:12,630
the tropics, measuring storms like these in the mid- and high-latitudes

19
00:01:12,650 --> 00:01:16,690
will improve and expand the global view of precipitation.